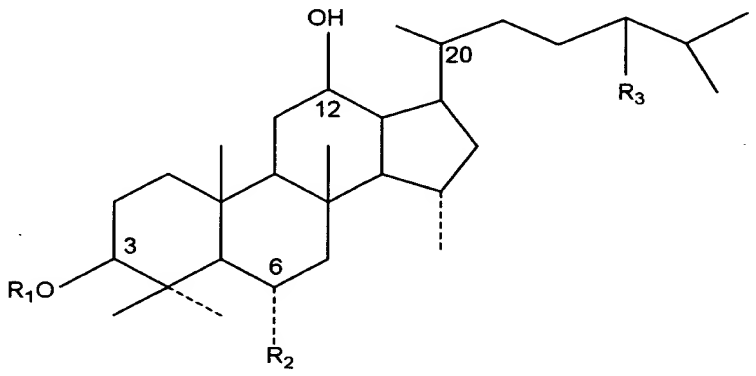
Amendments to the Claims

1. (Currently Amended) A sapogenin according to the formula:



wherein R1 is H~~,~~ or glc ~~or glc$^{1-2}$~~, R2 is H or OH, R3 is H or OH; and when R1, R2 and R3 are H, there are double bonds at positions 20(21) and 24(25); and when R1 is H, R2 is OH and R3 is OH, there are double bonds at positions 20(22) and 25(26); ~~and when R1 is H, R2 is OH and R3 is H, there are double bonds at positions 20(22) and 24(25)~~; and when R1 is glc, R2 is H and R3 is H, there are double bonds at positions 20(21) and 24(25); ~~and when R1 is glc$^{1-2}$glc, R2 is H and R3 is H, there are double bonds at positions 20(22) and 24(25),~~ and pharmaceutically acceptable compositions incorporating said sapogenins.

2. (Original) A sapogenin as claimed in claim 1 wherein R1, R2 and R3 are H, and there are double bonds at 20(21) and 24(25).

3. (Original) A sapogenin as claimed in claim 1 wherein R1 is H, R2 and R3 are OH, and there are double bonds at 20(22) and 25(26).

4. (Cancelled).

5. (Original) A sapogenin as claimed in claim 1 wherein R1 is glc, R2 and R3 are H, and there are double bonds at 20(21) and 24(25).

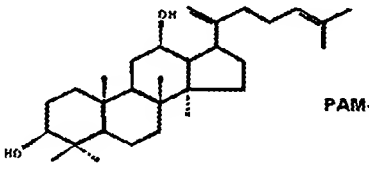
6. (Cancelled).

7. (Currently Amended) ~~The use of a sapogenin according to the formula recited in claim 1 in~~ A method of treating cancer cells in a human being suffering from cancer,

comprising ~~killing cancer cells, inducing apoptosis in cancer cells, or inhibiting multiplication of cancer cells, or any combination thereof,~~ administering to the human being a therapeutically effective amount of the sapogenin as claimed in claim 1 to ~~killing~~ kill the cancer cells, ~~inducing~~ induce apoptosis in the cancer cells, ~~or inhibiting~~ inhibit multiplication of the cancer cells, or any combination thereof.

8. (Currently Amended) ~~The use of a sapogenin according to the formula recited in claim 1 in~~ A method of treating multi-drug resistant cancer cells (MDR) in a human being suffering from cancer, comprising ~~using~~ administering the sapogenins as claimed in claim 1 either singly, or in combination with one another, or in combination with other chemotherapy agents.

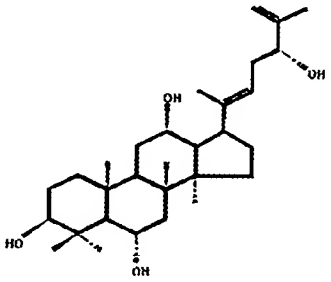
9. (Original) A sapogenin according to the formula:



PAM-120

BP

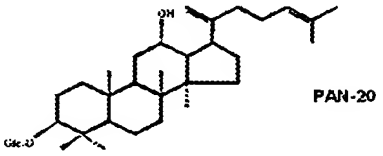
10. (Original) A sapogenin according to the formula:



PBM-100

11. (Cancelled)

12. (Original) A sapogenin according to the formula:



13. (Cancelled)

14. (Currently Amended) A method of treating cancer in human beings or other animals suffering from cancer comprising administering to said human beings a therapeutically effective amount of a composition comprising one or more of PAM-120, PBM-100 and ~~PBM-110~~ PAN-20.

15. (Cancelled)

16. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 14 wherein the method comprises ~~comprising~~ administering a ~~pharmaceutically~~ therapeutically effective amount of one or more of PAM-120, PBM-100 and ~~PBM-110~~ PAN-20 with or without one or more pharmaceutically acceptable carriers, and with or without one or more chemotherapeutic agents.

17. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 14, wherein the ~~active ingredient~~ method comprises administering the composition ~~is administered~~ in a dosage of between 5 micrograms to 50 grams per kg body weight per day.

18. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 14, wherein the ~~active ingredient~~ method comprises ~~is administered~~ administering the composition in a dosage of between ~~5o~~ 50 micrograms to 5 grams per kg body weight per day.

19. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 17, wherein the method comprises administering ~~form of~~ the composition in a form ~~is~~ selected from the group consisting of an orally administrable form, an injectable form, and a topically applicable form.

20. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 19, wherein the method comprises administering the composition in an orally administrable form ~~is~~ selected from the group consisting of a tablet, a powder, a suspension, an emulsion, a capsule, a granule, a troche, a pill, a liquid, a spirit, a syrup and a lemonade.

21. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 19, wherein the method comprises administering the composition in an injectable form ~~is~~ selected from the group consisting of a liquid, a suspension and a solution.

22. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 19, wherein the method comprises administering the composition in a topically applicable form ~~is~~ selected from the group consisting of a drop, a paste, an ointment, a liquid, a powder, a plaster, a suppository, an aerosol, a liniment, a lotion, an enema and an emulsion.

23. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 14, wherein the method comprises administering the composition ~~is administered~~ to human beings who are receiving one or more other anti-cancer treatments.

24. (Cancelled)

25. (Currently Amended) The ~~cancer-treatment~~ method of treating cancer as claimed in claim 14, wherein the method comprises formulating the composition ~~is formulated~~ with one or more other anti-cancer agents, for additive treatment effects, or synergistic treatment effects on multi-drug resistance cancers or any other cancer type.

26. (Cancelled)

27. (Original) A process of preparing a sapogenin as claimed in claim 1 which comprises producing a ginsenoside extract from plants selected from the group consisting of panax

ginseng, panax quinguefol and panax notoginseng, or a sapogenin source from some other plant, and proceeding according to the following steps:

(a) mixing the ginsenoside extract with water;

(b) (i) mixing the ginsenoside extract and water with a short-chain (1-5 carbon) alkali-metal alcoholate solution or a hydroxide-ethanol solution to produce a mixture; and

(ii) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions under required high temperature and high pressure; or

(c) (i) alternatively, mixing the ginsenosides extract with ethanol;

(ii) mixing the extract and ethanol with alkali-metal alcoholates solution to produce a mixture, and

(iii) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions under required high temperature and high pressure;

(d) after the reaction is completed, collecting an intermediate product of a mix of gensenosides and sapogenins from the ethanol mixture; and

(e) separating the desired sapogenins from the intermediate saponin-sapogenin mixture by silica-gel-column chromatography.

28. (Original) A process as claimed in claim 27 wherein the alkali metal can be potassium or sodium.

29. (Original) A process as claimed in claim 27 wherein the hydroxide can be sodium hydroxide or potassium hydroxide.

30. (Original) A process as claimed in claim 27 wherein the alkali-metal alcoholates solution or the concentration of hydroxide-ethanol solution is 5~50% (W/V).

31. (Original) A process as claimed in claim 27 wherein the ethanol has 1~5 carbon atoms.

32. (Original) The process as claimed in claim 27 wherein the temperature of the reaction tank is between 150~300°C and the reaction pressure is between 2.5~8.4 MPa.

33. (Currently amended) A process of preparing a sapogenin as claimed in claim 1 which comprises producing a ginsenoside extract from plants selected from the group consisting of

panax ginseng, panax quinguefol and panax notoginseng, and proceeding according to the following steps:

(a) mixing the ginsenoside extract with water;

(b) mixing the ginsenoside extract and water with a short-chain (1-5 carbon) alkali-metal alcoholate solution or a hydroxide-ethanol solution to produce a mixture; and

(c) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions under required high temperature and high pressure; ~~or~~ and

(d) after the reaction is completed, collecting an intermediate product of a mix of gensenosides and sapogenins from the ethanol mixture; and

(e) separating the desired sapogenins from the intermediate saponin-sapogenin mixture by silica-gel-column chromatography.

34. (Currently Amended) A process of preparing a sapogenin as claimed in claim 1 which comprises producing a ginsenoside extract from plants selected from the group consisting of panax ginseng, panax quinguefol and panax notoginseng, and proceeding according to the following steps:

(a) ~~mixing the ginsenoside extract with water;~~

~~(b)~~ ~~alternatively,~~ mixing the ginsenosides extract with ethanol;

~~(c)~~ (b) mixing the extract and ethanol with alkali-metal alcoholates solution to produce a mixture, and

~~(d)~~ (c) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions under required high temperature and high pressure;

~~(e)~~ (d) after the reaction is completed, collecting an intermediate product of a mix of gensenosides and sapogenins from the ethanol mixture; and

~~(f)~~ (e) separating the desired sapogenins from the intermediate saponin-sapogenin mixture by silica-gel-column chromatography.

35. (New) A method of treating human lung cancer cells comprising administering a therapeutically effective amount of one or more of PAM-120, PBM-100, and PAN-30 to kill the lung cancer cells, induce apoptosis in the lung cancer cells, inhibit multiplication of the lung cancer cells, or any combination thereof.

36. (New) The method of treating human lung cancer cells as claimed in claim 35, wherein the method comprises administering a therapeutically effective amount of PAM-120.

37. (New) The method of treating human lung cancer cells as claimed in claim 35, wherein the method comprises administering a therapeutically effective amount of PBM-100.

38. (New) The method of treating human lung cancer cells as claimed in claim 35, wherein the method comprises administering a therapeutically effective amount of PAN-30.

39. (New) A method of treating sarcoma tumor cells comprising administering a therapeutically effective amount of one or more of PAM-120, PBM-100, PBM-110, PAN-20, and PAN-30 to kill the sarcoma tumor cells, induce apoptosis in the sarcoma tumor cells, inhibit multiplication of the sarcoma tumor cells, or any combination thereof.

40. (New) The method of treating sarcoma tumor cells as claimed in claim 39, wherein the method comprises administering a therapeutically effective amount of PAM-120.

41. (New) The method of treating sarcoma tumor cells as claimed in claim 39, wherein the method comprises administering a therapeutically effective amount of PBM-100.

42. (New) The method of treating sarcoma tumor cells as claimed in claim 39, wherein the method comprises administering a therapeutically effective amount of PBM-110.

43. (New) The method of treating sarcoma tumor cells as claimed in claim 39, wherein the method comprises administering a therapeutically effective amount of PAN-20.

44. (New) The method of treating sarcoma tumor cells as claimed in claim 39, wherein the method comprises administering a therapeutically effective amount of PAN-30.

45. (New) A method of prolonging life span of a patient being suffering from sarcoma comprising administering a therapeutically effective amount of PAM-120.

46. (New) A method of treating human breast cancer cells comprising administering a therapeutically effective amount of one or more of PAM-120, PBM-100, PBM-110, and PAN-30 to kill the breast cancer cells, induce apoptosis in the breast cancer cells, inhibit multiplication of the breast cancer cells, or any combination thereof.

47. (New) The method of treating human breast cancer cells as claimed in claim 46, wherein the method comprises treating multi-drug resistant human breast cancer cells.

48. (New) The method of treating human breast cancer cells as claimed in claim 46, wherein the method comprises administering a therapeutically effective amount of PAM-120.

49. (New) The method of treating human breast cancer cells as claimed in claim 46, wherein the method comprises administering a therapeutically effective amount of PBM-100.

50. (New) The method of treating human breast cancer cells as claimed in claim 46, wherein the method comprises administering a therapeutically effective amount of PBM-110.

51. (New) The method of treating human breast cancer cells as claimed in claim 46, wherein the method comprises administering a therapeutically effective amount of PAN-30.

52. (New) The method of treating human breast cancer cells as claimed in claim 48, wherein the method further comprises combining PAM-120 with a chemotherapeutic agent.

53. (New) The method of treating human breast cancer cells as claimed in claim 52, wherein the method comprises treating multi-drug resistant human breast cancer cells.

54. (New) The method of treating human breast cancer cells as claimed in claim 52, wherein the method comprises combining PAM-120 with cisplatin.

55. (New) The method of treating human breast cancer cells as claimed in claim 53, wherein the method comprises combining PAM-120 with cisplatin.

56. (New) The method of treating human breast cancer cells as claimed in claim 52, wherein the method comprises combining PAM-120 with taxol.

57. (New) The method of treating human breast cancer cells as claimed in claim 53, wherein the method comprises combining PAM-120 with taxol.

58. (New) A method of treating human malignant glioma cells comprising administering a therapeutically effective amount of PAM-120 to kill the malignant glioma cells, induce apoptosis in the malignant glioma cells, inhibit multiplication of the malignant glioma cells, or any combination thereof.

59. (New) The sapogenin as claimed in claim 1, wherein the sapogenin is incorporated into a food, a health food, a nutritional product, a natural product, or an alternative medicine product.

60. (New) A method of treating melanoma cells comprising administering a therapeutically effective amount of one or more of PAM-120, PBM-100, PBM-110, PAN-20, and PAN-30 to kill the melanoma cells, induce apoptosis in the melanoma cells, inhibit multiplication of the melanoma cells, or any combination thereof.

61. (New) The method of treating melanoma cells as claimed in claim 60, wherein the method comprises administering a therapeutically effective amount of PAM-120.

62. (New) The method of treating melanoma cells as claimed in claim 60, wherein the method comprises administering a therapeutically effective amount of PBM-100.

63. (New) The method of treating melanoma cells as claimed in claim 60, wherein the method comprises administering a therapeutically effective amount of PBM-110.

64. (New) The method of treating melanoma cells as claimed in claim 60, wherein the method comprises administering a therapeutically effective amount of PAN-20.

65. (New) The method of treating melanoma cells as claimed in claim 60, wherein the method comprises administering a therapeutically effective amount of PAN-30.

66. (New) The process as claimed in claim 27 wherein the temperature of the reaction tank is between 240-300°C and the reaction pressure is between 3.5 - 8.4 MPa.

67. (New) A process of preparing a sapogenin as claimed in claim 1 which comprises producing a ginsenoside extract from plants selected from the group consisting of panax ginseng, panax quinguefol and panax notoginseng, or a sapogenin source from some other plant, and proceeding according to the following steps:

(a) mixing the ginsenoside extract with water;

(b) (i) mixing the ginsenoside extract and water with a short-chain (1-5 carbon) alkali-metal alcoholate solution or a hydroxide-ethanol solution to produce a mixture; and

(ii) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions at a temperature between 240 - 300°C and at a pressure between 3.5 - 8.4 MPa; or

(c) (i) alternatively, mixing the ginsenosides extract with ethanol;

(ii) mixing the extract and ethanol with alkali-metal alcoholates solution to produce a mixture, and

(iii) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions at a temperature between 240 - 300°C and at a pressure between 3.5 - 8.4 MPa;

(d) after the reaction is completed, collecting an intermediate product of a mix of gensenosides and sapogenins from the ethanol mixture; and

(e) separating the desired sapogenins from the intermediate saponin-sapogenin mixture by silica-gel-column chromatography.

68. (New) A process of preparing a sapogenin as claimed in claim 1 which comprises producing a ginsenoside extract from plants selected from the group consisting of panax ginseng, panax quinguefol and panax notoginseng, and proceeding according to the following steps:

(a) mixing the ginsenoside extract with water;

(b) mixing the ginsenoside extract and water with a short-chain (1-5 carbon) alkali-metal alcoholate solution or a hydroxide-ethanol solution to produce a mixture;

(c) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions at a temperature between 240 - 300°C and a pressure between 3.5 - 8.4 MPa;

(d) after the reaction is completed, collecting an intermediate product of a mix of gensenosides and sapogenins from the ethanol mixture; and

(e) separating the desired sapogenins from the intermediate saponin-sapogenin mixture by silica-gel-column chromatography.

69. (New) A process of preparing a sapogenin as claimed in claim 1 which comprises producing a ginsenoside extract from plants selected from the group consisting of panax ginseng, panax quinguefol and panax notoginseng, and proceeding according to the following steps:

(a) mixing the ginsenosides extract with ethanol;

(b) mixing the extract and ethanol with alkali-metal alcoholates solution to produce a mixture, and

(c) placing the resultant mixture in a reaction tank so that the resultant mixture can undergo chemical reactions at a temperature between 240 - 300°C and a pressure between 3.5 - 8.4 MPa;

(d) after the reaction is completed, collecting an intermediate product of a mix of gensenosides and sapogenins from the ethanol mixture; and

(e) separating the desired sapogenins from the intermediate saponin-sapogenin mixture by silica-gel-column chromatography.